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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/736,843

12/17/2003

Jin-Gyo Seo

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08/09/2006

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EXAMINER

GRANT II, JEROME

ART UNIT

PAPER NUMBER

2625

DATE MAILED: 08/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/736,843

Applicant(s)

SEO, JIN-GYO

Examiner

Jerome Grant II

Art Unit

2626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☒ Certified copies of the priority documents have been received in Application No. 09/623,309.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

JEROME GRANT II
PRIMARY EXAMINER

Detailed Action

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maegawa in view of any one of US Patent Pub 20020015371; US Patent Pub 20010046613; US Pat. 6,721,254 or US Pat. Pub 20060136956.

With respect to claim 1, Maegawa discloses an adaptive writing method of writing input data on an optical recording medium using a write pulse waveform including a first pulse, a last pulse and a multi-pulse train (according to col. 8, lines 20-40), the adaptive writing method comprising: controlling a level of write power of the laser diode in accordance with a size of a present mark to be recorded on the recording medium and a size of at least one of a leading space of the present mark and a trailing space of the present mark to be recorded (see col. 8, line 41- col. 9, line 7); and writing the present mark on the optical recording medium using the controlled level of write power of the laser diode (see col. 9, lines 11-32).

What is not specifically disclosed by Maegawa is the level of write power increasing with respect to the increasing size of the present mark that is to be recorded.

However this limitation is clearly taught by the prior art and even in combination with what is disclosed by Maegawa, would not be patentable over the prior art.

For example, US Patent 6,721,254 teaches that if the recording laser power increases, the size of the marks recorded on a disk increases. See col. 19, beginning at line 35.

In US Pat. Pub. 20010046613, high power recording causes an increase in the width of the recording mark. See paragraph 0070.

In US Pat. Pub. 20020015371, recording marks grow larger as the laser power increases. See, paragraph 0019.

In US Pat. Pub. 20060136956, higher writing powers, result in the size of the marks increasing and exceeding tolerated dimensions. See paragraph 0014.

Therefore, based on the aforementioned examples gleaned from the prior art, it is clear that the phenomenon of increasing the size of a mark with an increase in writing power, is a concept that is well established and is not a limitation which can be afforded a patented protection.

Art Unit: 2626

Maegawa, in combination with anyone of US Patent Pub 20020015371; US Patent Pub 20010046613; US Pat. 6,721,254 or US Pat. Pub 20060136956, would have been obvious to one of ordinary skill in the art. It would have been obvious to modify the level writing process so that the size of the mark increases as the power to the writing means increases as suggested by the prior art.

Therefore, it would have been obvious to combine Maegawa with any of the above named prior art references to increase the writing level to increase the size of the mark that is to be recorded.

With respect to claim 2, Maegawa discloses wherein the power of the laser diode is varied based on a recording power level controlled by auto laser diode power control, see col. 8, line 41- col. 9, line 7).

With respect to claim 3, Maegawa teaches the mark size is in a range of 3T and 14T, (see col. 8, line 41 – col. 9, line 7).

With respect to claim 4, Maegawa discloses an adaptive recording method for controlling power which a laser diode applies to a recording medium, see col. 8, lines 20-40. Maegawa teaches discriminating a mark size to be recorded on the recording medium from an input signal, see col. 8, line 41 to col. 9, line 7; setting a level of write

Art Unit: 2626

power of the laser diode in accordance with a magnitude of a present mark of the input data and a magnitude of at least one of a leading space of the present mark and a trailing space of the present mark (col. 8, lines 41 – col. 9, line 7); and writing the data on the optical recording medium using the level of write power of the laser diode, see col. 9, lines 11-32.

Maegawa does not disclose the level of write power increasing with respect to the increasing size of the present mark to be recorded.

However, the grounds and motivation for the rejection of claim 4 is the same as that provided in the rejection of claim 1.

With respect to claim 5, Maegawa teaches wherein the power of the laser diode is varied based on the recording power level controlled by auto laser diode power control, see col. 8, line 41 to col. 9, line 7.

With respect to claim 6, Maegawa teaches an adaptive writing method of writing data on an optical recording medium using a write pulse waveform including a first pulse, a last pulse and a multi-pulse train, the adaptive writing method comprising: discriminating mark size of input Non Return to Zero Inversion data ; and increasing power of overwrite pulses in accordance with a magnitude of a present mark of the input data and a magnitude of at least one of a leading space of the present mark and a trailing space of the present mark.

With regard to claim 7, Maegawa discloses an adaptive recording apparatus for controlling power of a laser diode, comprising: a discriminator which discriminates at least one of a mark size and a relationship between preceding and following spaces of input data and accordingly sets a power level which increases according to the mark size based on the discriminated mark size; a generator which generates an overwrite pulse by controlling a waveform of an overwrite pulse in accordance with the input data; and laser diode driver which adaptively drives the laser diode in accordance with the mark size by converting a differentiated value between the power level set by the discriminator and a level of a reflected optical signal into a current signal (col. 8, lines 20-40).

With respect to claim 8, Maegawa discloses wherein the discriminator further comprises a table in which respective power level data corresponding to mark sizes in a range of $3T - 14T$ are stored and the discriminator sets power levels for the respective mark sizes by reference to the table, see col. 9, lines 48-60.

With respect to claim 9, Maegawa discloses wherein the data stored in the table are updated into optimal power level data, see col. 8, line 41- col. 9, line 7.

With regard to claim 10, Maegawa discloses an adaptive recording method for controlling power which a laser diode applies to a recording medium, comprising: discriminating a mark size to be recorded on the recording medium from an input signal (col. 8, line 41- col. 9, line 7); initially setting a level of write power of the laser diode in

Art Unit: 2626

accordance with the discriminated mark size wherein the initially set level of write power increases as the mark size increases in a range of mark sizes of 3T to 14T ; and adaptively varying the level of write power applied to the laser diode set for each mark or space in response to a power level of a signal reflected from the recording medium during production of the marks.

With regard to claim 11, Maegawa discloses wherein the initially set power level increases proportional to the mark size in the range of mark sizes of 3T to 14T .

With respect to claim 12, Maegawa discloses wherein the initially set level of the write power for a mark size of 5T is about 10 percent greater than the initially set level of write power of a mark size of 3T, see col. 9, lines 48-60

With respect to claim 13, Maegawa teaches the initially set level of the write power for a mark size of 1T is about 20 percent greater than the initial set level of the write power for a mark size of 3T, see col. 9, lines 48-60).

Examiner's Remarks

Applicant's remarks have been considered and are persuasive. Hence the new grounds of rejection addressing the increase of the size of the mark that is to be recorded when the writing power increases.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerome Grant II whose telephone number is 571-272-7463. The examiner can normally be reached on Mon.-Thurs. from 9:00 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Moore, can be reached on 571-272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

J. Grant II

JEROME GRANT II
PRIMARY EXAMINER